REMARKS

Claims 1 – 14, 18 – 19, 21 – 28, and 31 – 32 have been canceled.

Independent claims 15-17, 20, 29-30 and 32 are pending.

Claims 33-36 have been added.

To best appreciate Applicant's invention, it is important to understand the improvement.

In the past several decades, drywall construction has fairly much replaced lath and plaster construction. Two different types of fitting devices sometimes referred to generally as bead devices have been recognized for covering the joint formed at the corners of joining drywall panels for finishing thereof. These beads are generally known as nail-on and tape on type construction. Nail-on type beads typically incorporated angular steel flange devices formed with holes for the receipt of nails to anchor the bead in position on the drywall corner. It is known to roughen the exterior surface of those metal beads to facilitate the adherence of joint material thereto.

In effort to more closely match the characteristics of the exterior surface of the bead with the paper exterior of drywall panels, paper coverings were proposed. These coverings were typically in strip form and could be formed with flexible flat flaps which projected laterally beyond the longitudinal edges of a rigid core flange to form a gentle transition over the edge of the core. It was known to coat the interior surfaces of such beads and flaps with a thin layer of joint material to provide an adhesive characteristic to allow the workman, while the layer of joint material remains uncured, to place the bead in position over, for instance, a corner joint to be held in position as the joint was finished off. These beads were particularly referred to as tape-on type beads. Different constructions were proposed for strengthening the paper flaps, for enhancing the bonding characteristics thereof and for resisting scuffing and the like. A persistent problem remained, however. Without nailing the beads in place, the beads could be fairly easily pulled loose from the cured compound, thus cracking the exposed surface of the joint material leaving an unsightly finished appearance. It is this problem to which the Applicant's invention is directed.

Applicant's invention is in the form of a relatively rigid core 20 typically formed with oppositely projecting flanges 26 which might be oriented at 90° to one another for fitting over an orthogonal corner formed between a pair of drywall panels 96 and 98. Such drywall panels 96 and 98 are typically covered on their exteriors with conventional covering paper to be overlayed by the flaps.

The cover 40 is constructed to project laterally beyond the respective edges of the flanges 26 to form respective exterior and interior surfaces 52 and 54 (Fig. 2). The paper forming the flaps 50 is corrugated as shown in Fig. 6 to form on both the interior and exterior surfaces respective grooves and ridges. It is the interior corrugations that are most important in securely anchoring the beads in the joint compound. In one embodiment, the ridges 58 rise up about 1/64th of an inch from the bottom of the respective grooves thus leaving grooves which may be filled with joint compound to a depth of about 1/64th of an inch to thus form longitudinal extending mirror images to define compound ribbing which will mechanically resist the flanges pulling loose from the compound once it is cured. In the embodiment shown, there are four such ribs and grooves, it being appreciated that there may be more or less such grooves depending on the particular application.

Consequently, in applying the bead to the drywall corner, the interior surface thereof including the interior surface 54 of the flaps may be coated in a conventional manner by a joint compound applicator. When applied to the drywall corner, the joint compound will serve to temporarily adhere the bead in place as shown in Fig. 4. The workman may merely press the bead in place on the compound and wipe the exterior of the covered core clean with a rag. The compound may be feathered out along the exterior to form a gradual transition from the edge 42 of the flaps (Figs. 2 and 3) to present a smooth attractive final appearance. Once cured, the compound will form compound ribs corresponding with the grooves formed on the interior surface 54. Once the compound has cured, it will be appreciated that the compound ribs formed in the grooves on the interior will be particularly effective cooperating with the grooves and ridges with flaps to resist dislodgement of the bead from the surfaces of the respective drywall panels 96 and 98.

The construction of the bead of the present invention providing for these features is set out in the independent claims, including claim 33. Claim 33 calls for the relatively rigid core 20 and paper cover 40 with the projecting flaps 50. The groove and rib arrangement thus provides for the anchoring feature as set forth. Additionally, since the paper covering posses characteristics comparable to those of the drywall panel, that covering will absorb moisture from the curing compound at a rate comparable to that of the paper covering the drywall. Applicant's construction should be contrasted with the prior art described above.

U.S. Patent 2,012,203 to Peterson

This patent is not directed to a drywall bead. Rather, it is directed to a lath and plaster bead which "will accommodate expansion and contraction, will effectually hold the plaster, and will form a guide for a chamfered corner" (Column 1, lines 1- 5).

The device is constructed of a stamped or pressed sheet metal sheet. The bead is formed with nail-on holes for anchoring it in position. It includes a pair of hollow divider ribs 7 which project outwardly from the outer surface to extend entirely to the outer surface of the plaster 12. It is contemplated that the rolls 7 might be "slightly exposed" to produce an attractive finish (bottom of column 1, top of column 2).

Consequently, Peterson is not directed to a drywall corner bead to be concealed in joint compound at the joint between drywall panels. He does not suggest embedding a multiple groove and ridge arrangement on the underside of flaps in a drywall joint compound but, rather, suggests separation of plaster at an expansion joint where a separate plaster strip is formed between the rolls 7 on the exterior of the bead as shown in Fig. 3.

U.S. Patent No. 6,295,776 to Kunz

This patent proposes an improvement over U.S. Patent Nos. 5,613,335 and 5,836,122 to Rennich. Kunz proposes a conventional core having flaps 16 and 18 formed at the corner by a nose 14 sometimes loosely referred to in the trade as a bead. The nose forms a raised straight edge so that joint compound applied to the flanges on the opposite sides thereof, when smoothed by a trowel following the straight edge, will form horizontal cross sections defining wedges as shown at 28, Fig. 2. He incorporates some small diameter holes in his flat paper flaps suggesting

that the "joint cement 28 applied to the exterior surface thereof" will assist adhering the paper (col. 4, lines 48-51). It is also recognized in Column 2 that Rennich disclosed a tape-on bead utilizing a stock paper layer impregnated with latex or a similar strengthening compound. Kunz criticized the use of stock paper impregnated in this manner in that it exhibits poor compound bonding characteristics (Column 2, line 25). He states that he had observed the peeling of the paper away from a joint compound bond thus exhibiting failure to meet a specific ASTM standard.

He describes forming the cover strip of a stock paper having high abrasion resistance, and which is dimensionally stable on contact with wet joint compound. He proposes abrading the surface to loosen the surface fibers to increase the strength of the (bond for) corner bead when installed on a drywall board (Column 2, lines 55 – 59).

He touts that one of the advantages of his sandback paper is that it may be produced without impregnation of latex or other strengthening compound (Column 4, line 30 -33).

Thus, contrary to Kunz, Applicant's invention is formed into grooves on the underside of the flaps to utilize a compound thereunder to anchor. It allows for the use of paper strengthened with latex or the like (see Specification, P. 10, Lines 8-19).

U.S. Patent No. Re. 34,547 to Weldy

Weldy recognizes some of the short comings of two-piece corner bead construction incorporating a metal core. In effort to overcome these shortcomings, he proposes extruding a one piece plastic strip formed with an integral core and reduced thickness flanges 14. He also proposes an integral longitudinal projecting tongue 32. His construction includes nail holes 26 in the flanges for nailing the bead in place for a conventional nail on type construction.

While not generally concerned with a tape-on type construction, he does acknowledge that the flanges 14 may be striated as shown at 24 on the other surface much like record grooves to form a roughened area for holding the mud in place on the exterior. There is no mention of grooves and ridges or even striations on the interior surface which would facilitate anchoring to the drywall panels 18. Nor would there be any motivation to form grooves and ridges on the

interior surfaces since the flanges are nailed in position and there is no need for additional anchoring elements.

ARGUMENT

From the foregoing it is clear Peterson does not, in fact, include elongated grooves and ridges as set forth in Applicant's claim. Rather, he shows only a pair of divider ribs in conjunction with each of the opposing flanges 5 and does not construct or utilize such ribs in a combination which would act to anchor the bead in place with drywall joint compound.

Nor is there any motivation for such anchoring since he already includes nail holes for nailing of his bead to the laths. Thus, Peterson shows nothing which one skilled in the art would perceive as being suggesting the invention in Applicant's claims.

Kunz admittedly does not incorporate grooves and ridges. Rather, he relies on the high strength sandpaper backing, apparently for tensile strength and on the abrading thereof for his anchoring feature. One skilled in the art would recognize that such abrading of the surface of a paper flap would serve to denigrate the structural integrity of the paper and its ability to take firm set when knurled. Consequently, Kunz teaches away from the concept of grooves and ridges in the paper flap to trap moldable compound between the flap and diagonal surface to form anchoring ridges.

Absent Applicant's disclosure, there is no suggestion of combining Kunz and Peterson. Peterson is directed to lath and plaster construction. Kunz is directed to drywall construction. There is no showing that those skilled in the art would recognize Peterson as functioning properly in drywall construction.

To reconstruct Peterson's rolls 7 to project inwardly on the interior of Kunz's paper flaps and reduce the size so they might be embedded in relatively thin joint compound would be to defeat the very purpose of Peterson. The actual construction would have a rib on the wrong side of the flap and, to be functional in this single combination, would be too small to achieve Peterson's operations. Also, to reduce that size and add multiple grooves and ridges would be to further defeat the purposes of Peterson who seeks to provide flexibility for an expansion joint and a specified contour for a chamfered 45° corner joint.

Thus, that there is no suggestion of combining Kunz and Peterson and that, if combined, Applicant's results will be achieved.

Weldy is not helpful in suggesting Applicant's solution. Weldy merely teaches a roughening of the exterior surface by stiration without any suggestion that grooves and ridges could be formed on the interior of flanges to substitute for the nails shown in Fig. 2. To increase the size of the stirations to cause the grooves therebetween to act as forms or molds to receive joint compound and therefore such re-formed stirations to the underside of the flaps would be to defeat the purpose of Weldy in two aspects. First, the irregularities would be on the wrong side of the flaps to act as a roughened surface to facilitate in adhering the underlying compound on the interior of the flap. Second, the enlarged size of the ridges and grooves would, to the extent reflected on the exterior surface of the flap, serve to generate a more irregular, not a smooth surface, for the joint compound itself. This is not what Weldy intended.

Claim 15 recites a relatively rigid core with a convex configuration, sometimes referred to as a bull nose shape, a paper cover bonded to the surface and formed with flaps, wherein the flaps are configured with elongated grooves and ridges and spaced apart perforations.

This allows for the compound to flow into the grooves to be funneled into the perforations 60 (Fig. 3) to cooperate with the mirror grooves and ridges in the compound on the underside of the flaps to enhance mechanical bonding thereof. Kunz does not concern himself with grooves and ridges, and Peterson only seeks ribs for flexibility and nowhere suggests funneling of compound into perforations formed in grooves between multiple ridges in a paper flap.

Claim 16 recites a metal core with paper covering defining flaps formed with elongated grooves and ridges and the flaps being formed with spaced apart perforations spaced along the grooves. As in claim 15, this construction is not suggested by the prior art. Peterson provides for nailing of his lead-in position so does not require the enhanced anchoring afforded by interlocking grooves and ridges and compound posts defined in the perforations.

Claim 17 recites a drywall joint having an elongated core, paper cover bonded thereto, and defining flaps with rib means on at least one side to cooperate with the joint compound to

form a mechanical barrier, as well as compound directing means (perforations) to provide for facilitation of the flowing of the compound. This combination is totally new with Applicant's construction. Neither Kunz nor Peterson provides any motivation for multiple grooves and ridges in the paper flaps as shown in Fig. 3 or the funneling of a compound into the perforation 60 to form posts.

Claim 20 recites a corner protection strip device including a metal core which is arcuate in cross section, a paper cover bonded thereto, and formed with flexible flaps having a plurality of elongated grooves and ridges formed therein, as well as spaced apart perforations. This claim is similar in scope to claim 33 and is likewise believed to be allowable.

Particular note should be made of claim 30 which calls for the grooves and ridges to be spaced apart by 1/8 of an inch and having a depth of 1/64 of an inch. There is no showing in the record that Peterson would function as an expansion joint or a chamfer tool modified as set forth in this claim.

Weldy is of no assistance in this regard. Mere stirations are for the sole purpose of adding of roughening the exterior area and have not been shown to serve to anchor the underside of the flange of the flat surface. Nor is there any showing that conventional drywall paper or covering of similar characteristics would even conform to a stiration pattern like record grooves.

Claim 32 recites a relatively rigid core and a relatively flexible cover bonded thereto and projecting from the opposite edges to form longitudinal flaps. The flaps are recited as being formed with elongated lengthwise groove and ridge means for receiving the compound therein to anchor in position. This construction is also shown in Fig. 3. There is nothing shown in the art for achieving this same function and no structure which is mechanically equivalent thereto. That is, Peterson only provides a single divider rib in his flanges with no paper flaps and with no multiple grooves or ridges in paper flaps. The other references of record rely on different construction for anchoring, such as abrading

the paper to raise the fiber ends or the like. None show or suggest the invention as claimed in claim 32.

Claim 34 is similar to claim 33 and recites the core with paper projecting laterally from the opposite sides to form flexible flaps and bonded to the core. The flaps are recited as being formed on at least the underside with longitudinal parallel alternating ridges and grooves for receipt of joint compound. Peterson failed to show any construction for receiving compound on the underside, let alone multiple ridges and grooves for receiving compound applied to a drywall joint. Claim 35 depends from claim 33 and is further restricted by the recitation of the paper being constructed of fibers and strengthening compound mixed together at the time of manufacture. While claims to the strengthened paper have been allowed in the companion case 09/825,766, filed April 3, 2001 as referred to on Page 10 of Applicant's Specification, none of the prior art suggests the combination of such paper strengthened at the time of manufacture. This constructed affords an important improvement over the prior art. With Applicant's groove and ridge construction, a much higher integrity anchoring is provided in the compound joint beyond that which would be provided by Kunz's so called tape-on bead, thus elevating the need for a high tensile strength paper flap which will not tear before the ridge and groove anchor gives way. Untreated paper flaps would possess a low tensile strength which would tear easily; thus, failing to provide the full benefits of Applicant's invention.

Claim 36 depends from claim 35 and is further restricted by the strengthening compound encapsulating the fibers. Nowhere in the art is it suggested to encapsulate fibers with the compound at the time of manufacture. Consequently it is likewise believed that this claim is allowable.

Attached hereto is a marked-up version of the changes made to the claims by the current Amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

In light of the above amendments and remarks, applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

On page 1, please amend the title as follows:

METHOD FOR MAKING DRYWALL BEAD WITH KNURLED PAPER FLAPS

Paragraph beginning at line 8 of page 1 has been added as follows:

Building construction over the years has typically involved framing to form a framework of vertical studs and cross members. Previously it was known to cover the studs with vertically spaced apart, horizontal slats, known as lath, and then to cover such slats with plaster troweled in place by a craftsman to provide a smooth finish. Plaster finishing is a very demanding task requiring skill and experience. Various types of corner finishes have been proposed, including a rolled metal expansion strip having a pair of wings defining ribs radiating outwardly to form cylindrical rolls disposed at the outer surface of the plaster layer so that plaster trapped therebetween will form a 45° finish chamfer. The plaster trapped between the ribs were then separated from covering the lath. This type of device is shown in U.S. Patent No. 2,012,203 to Peterson. It was contemplated that this expansion bead was to be nailed in place on the lath construction. To my knowledge such a device has never gained brand acceptance in the lath ad plaster construction field, and has never been used in drywall construction. It involves a rather elaborate forming process and would be relatively expensive to manufacture. Further, it

is not intended to be anchored by any paper flaps or constructed so joint compound can realistically be applied to the underside of ridges and grooves to be anchored in position.

In any event, the labor intensive and highly demanding lath and plaster construction has given way to drywall construction.

Paragraph beginning at page 1, line 7 has been added as follows:

-- Building construction over the years has typically involved framing to form a framework of vertical studs and cross members. Previously it was known to cover the studs with vertically spaced apart, horizontal slats, known as lath, and then to cover such slats with plaster troweled in place by a craftsman to provide a smoother finish. Plaster finishing was [is] a very demanding task requiring skill and experience. While enjoying popularity, it was believed there were problems of one lath and plaster walls shifting relative to another thus cracking and irregularities in the finished product. In recognition of the perceived problem, various [Various] types of corner fittings were [have been] proposed, including a rolled metal expansion strip having a pair of [wings defining] separator ribs radiating outwardly at 90° to one another to form cylindrical rolls having their respective [disposed at the] outer extents disposed at the outer surface of the plaster layer so that the outer surface of plaster trapped therebetween ,when troweled evenly into the ribs, will form a 45° finish chamfer. The vertical strip of plaster trapped between the ribs is [are] then separated from that covering the lath in the adjacent walls. An [This type] of expansion device of this type is shown in the 1934 U.S. Patent No. 2,012,203 to Peterson. It was contemplated that this expansion bead was to be nailed in place on the

lath construction. To my knowledge such a device [has] never gained broad acceptance in the lath and plaster construction field, and is not adopted to use as a tape or bead for [has never been used in] drywall construction. Absent the nail holes imparted on the metal flange, there is no means for anchoring the fitting to joint compound on the interior of the fitting so as to, when cured, anchor the fitting firmly in place. [It involves a rather elaborate forming process and would be relatively expensive to manufacture. Further, it is not intended to be anchored in place by nailing, a procedure which is relatively time consuming by any paper flaps or constructed so joint compound can realistically be applied to the underside of ridges and grooves to be anchored in position. In any event, the labor intensive and highly demanding lath and plaster construction has given way to drywall construction].--

Paragraph beginning at line 15 of page 3 has been amended as follows:

Drywall corner fittings take many configurations and those for right angle corners typically incorporate cores with orthogonal flanges. The flanges may joint at a sharp 90° corner or may be formed with a rounded rib defining a bead raised from the exterior surfaces of the flanges to define a raised edge or bead. Drywall construction finishing are sometimes referred to collectively as beads and typically fall into the category of nail or tape-on beads. One common feature of many of the nail trim strips or corner beads [currently available] is the use of a rigid or semi-rigid core fittings that caps the drywall corner joint to provide support and to prevent the drywall from being chipped or cracked along the otherwise exposed edges of the panels, typically incorporating nail holes for

nailing in place. Typical materials known and used in the art for such cores include galvanized steel, aluminum, plastic, and sometimes stiff, thick paper. It has been proposed to serrate the exterior of a metal core to provide a roughened surface to enhance attachment of compound to such exterior. [A disadvantage of these cores is that they must be anchored in some way as by nailing, screwing, or otherwise fastening to the drywall panels.] Beyond the fact that the so called nail-on beads must be nailed in place, is the disadvantage that the drywall joint compound applied to the corner joints to complete the assembly may not readily adhere to such rigid and semi-rigid materials making it difficult to cover, sand, paint or otherwise finish out the corner joint in an aesthetically-pleasing manner.

Efforts to overcome the shortcomings of metal beads have lead to extruded one piece nail-on plastic beads with a thick core and integral thin flaps constructed with nail holes. To facilitate the joint compound in adhering to the outer surface of the outer surface of the flanges, it has been proposed to form such outwardly facing surfaces with striations much like record grooves and spaced bodily from the thicker core. A device of this type is shown in U.S. Patent No. Re 34,547 to Weldy. While satisfactory for some application as a nail on drywall bead, such devices do not function well as a tape-on styled bead without such nailing. [A further disadvantage of such cores is that the drywall finishing compound applied to the corner joints to complete the assembly may not readily adhere to such rigid and semi-rigid core materials or easily conceal nail or screw heads, making it difficult to cover, sand, paint or otherwise finish out the corner joint in an aesthetically-pleasing manner.]

Paragraph beginning at line 8 of page 4 has been amended as follows:

To enhance the function and finished appearance of such drywall [corner joints configured with] corner beads, [efforts have been made to provide such beads with an exterior] a covering of some other material such as paper or fabric [to facilitate] has been employed. [both installation and application of the joint compound to the exterior surfaces thereof.] The challenge is to provide such an exterior covering that is substantial enough to secure the inner core in position while being thin enough to create a smooth transition between the cover and the underlying drywall. One bead developed to address some of the problems with the prior art is a corner bead with a metal core, covered on its exterior with a paper cover which projects beyond the opposite lateral edges to form flexile, flaps. [to be secured in place as by nailing and embedding in joint compound. I have discovered that such flaps often fail to securely anchor the corner bead device in place thus allowing for shifting of the bead relative to the drywall thereby producing an irregular appearance.] Such flaps, projecting beyond the edges of the flanges, can serve to form a smooth transition over such edges, and have been proposed to anchor the bead in place. Stock paper had the advantage that frayed fiber ends would facilitate adherence to the joint compound as it covered. The problem was that the frayed ends would project outwardly from the outer surface and would, upon sanding to finish, compound applied thereover, project through the compound as unsightly surface. By impregnating the paper throughout with latex, it was believed that the fraying could be reduced and the paper

strengthened. It was proposed that the core be covered with wallboard grade paper and that it be impregnated with latex to make the paper resistant to scuffing and such fraying. It was perceived that this construction exhibited poor joint compound bonding properties, thus subjecting it to unwanted peeling. Devices of this type are shown in U.S. Patent Nos. 5,613,335 and 5,836,122, both to Rennich. In effort to improve bonding properties, it was proposed to construct a tape-on bead with a stock paper having a high resistance to abrasion, such as backing used in commercially available sandpaper. It was perceived that any deficiency in bonding could be overcome by abrading the surface of the paper to loosen the surface fiber in effort to improve the bonding to the surface of the wallboard. A bead of this type is shown in U.S. Patent No. 6,295,776 to Kunz. In effort to improve the strength of bond to the joint compound, the flat flaps were formed with small holes so compound applied to the exterior would flow through. While such fraying of the fibers may, in fact, serve to resist peeling, experience has shown that the flat bead that Kunz proposed, a drywall fitting with a classic raised bead at the juncture between its two flanges to serve as a straight edge for application of compound to the exterior of the flanges. In any event, until now craftsmen have been forced to select between nail-on or fitting which are time consuming to install or tape-on fittings having flat paper flaps which do not bond well into the compound thereby being susceptible to pulling free from the cured joint with only minimal forces being applied thereto.

It has been common practice to apply joint compound, often referred to in the field as mud, to the interior surfaces of the core and the flanges prior to installation on a drywall corner. This compound then acts as an adhesive to help hold the bead

temporarily in place while it is nailed or compound is applied to paper flaps and is available to flow through holes in the flanges or to adhere to the interior surfaces of paper flaps.

Paragraph beginning at line 7 of page 5 has been deleted as follows:

[It has also been discovered that prior art corner beads suffer the shortcoming that such flaps are often wavy throughout their length, making it difficult to effectively cover the flap material with a smooth layer of joint material to adequately securely anchor them in the joint compound.]

Paragraph beginning at line 10 of page 5 has been amended as follows:

[Because these features have not been optimally satisfied in a single drywall bead design, there still exists a need for such a finishing bead that addresses each of these challenges.] Thus, there exists a need for a tape-on drywall bead which is inexpensive to manufacture and which incorporate paper flaps constructed to be securely anchor in place by joint compound applied under such flaps. With the enhanced anchoring capabilities, it would also be helpful if such flaps were strengthened against unwanted separation of the paper flaps when forces are applied to the core tending to force it away from the drywall. The present invention is directed to just such a drywall bead.

Paragraph beginning at line 1 of page 6 has been amended as follows:

The present invention provides a drywall bead which is convenient to install and still effective to attractively cover and protect the drywall panel joint. The drywall joint assembly strip device of the present invention is characterized by a lengthwise, longitudinal flexible flap [flaps] projecting from at least one side of a core and configured with [one or more] longitudinal grooves and ridges to provide a mechanical anchor in the joint compound on the underside thereof when covered therewith. In this regard, such grooves and ridges being formed on the interior side of the flaps can be particular effective in taking advantage of the joint compound, once cured, to firmly anchor the bead in position. In one aspect of this invention, the paper flaps are constructed of paper fibers mixed with strengthening compound at the time of manufacture. This serves to not only bond the fibers in place against abrading or fraying when during finish sanding the layer of covering compound is sanded through.--

C4

Paragraph beginning at line 11 of page 9 has been amended as follows:

C5

Referring to FIGS. 1 and 2, in one embodiment elongate core 20 is formed having a generally curved transverse cross-section to form what is known as a bull nose shape defining a convex outer surface 22 and a concave inner surface 24. The elongate flanges 26 project laterally beyond the longitudinal edges of the core. In the embodiment of the strip device shown, transitions are formed at the opposite sides of the bull nose curve to define slight bends serving to direct the respective flanges outwardly away from each other at an angle of about ninety degrees. The core may be made of a number of rigid or semi-rigid materials such as galvanized steel, aluminum, and a variety of plastics,

including vinyl, nylon, and PVC. In a preferred embodiment, I have found that flaps formed with a plurality of [from] parallel groove 56 and ridges 58 formed on the opposite sides thereof perform satisfactorily. A representative embodiment is formed with the grooves spaced laterally apart a distance of about 1/8th of an inch and the ribs formed to bow outwardly in transverse cross section as described below. Thus, once embedded, such ribs present respective barriers against lateral shifting of the respective flanges relative to the joint compound embedded in the respective grooves. Depending on the material selected and the core cross-section desired, the core may be formed through a variety of processes known in the art, including casting, molding, extruding, or roller-forming.

Paragraph beginning at line 4 of page 11 has been amended as follows:

The paper defining the cover 40 is bonded to the outer surface 22 of the formed core 20, using a hot melt glue or other such adhesive known in the art. Such cover is wider than such core so that the opposite margins 42 project laterally beyond the longitudinal edges 30 of the core to form the flaps 50. In one embodiment, such cover is bonded centered on the core so that the flaps are symmetrical on the opposite sides thereof. Generally, the cover is rectangular and positioned so that the longitudinal edges extend parallel to the respective longitudinal edges of the core. By extending beyond the edges of the underlying rigid core, both the outwardly-facing surfaces 52 and inwardly-facing surfaces 54 of the flaps are exposed free of such core. Referring to Figs. 2 and 3, compound applied to the underside surface 54 of the flaps will, when cured, firmly affix

the bead in place. Based on the grooved construction described, and with the flaps constructed of [the thin,] fibrous stock material mixed with strengthening compound, [from which the flaps are made,] it will be appreciated that the flaps may be formed with a relatively straight longitudinal configuration and will resist flexing along the longitudinal plane [axis] while still being somewhat flexible relative to the longitudinal edges of the core to facilitate conforming to the drywall as they [surface] [projecting] project from the opposite edges of such core. Thus, this preferred embodiment offers the advantage that the flaps are constructed to allow joint compound to be applied to the under surface 54 prior to mounting to the drywall corner, as shown in Fig. 4, while the configuration of the longitudinal ridges provide support against flexing from the respective longitudinal planes of the respective flaps, thereby maintaining relatively straight longitudinal flaps to engage against the straight surface of the underlying drywall.

C6

Paragraph beginning at line 16 of page 11 has been amended as follows:

Referring now to FIG. 3, the elongate, flexible flaps 50 are configured along their length [with one or more of the] with parallel grooves 56 and ridges 58. The ridges 58 are interposed lengthwise between the grooves 56 and are generally parallel to them. In one embodiment, three grooves and four ridges are formed in each flap. As noted, such lengthwise grooves and ridges cooperate to serve the purpose of reinforcing ribs and to provide linear stiffness for the flaps, thereby serving to reinforce against flexing out of the longitudinal plane to minimize [minimizing] longitudinal fluting or waviness in such

C7

flaps along their respective lengths while still allowing each flap to bend or flex relatively freely about an axis parallel to the respective longitudinal edges 30 of the core 20. It will be appreciated that this configuration maximizes the workability of the drywall joint assembly strip device 10 of the present invention, as the flaps are held straight in the longitudinal direction but are free to flex about vertical axes to lay down flat over the marginal edges of the joining drywall panels.

Paragraph beginning at line 3 of page 14 has been amended as follows:

In use, the drywall joint assembly strip device 10 of the present invention is installed vertically in covering relationship over the drywall corner joint 104 such that the concave interior surface 24 of the core 20 is adjacent to the corner joint. Typically, the strip device is cut to a length substantially equal to the length of the corner joint so as to completely cover and protect the entire corner joint. Wet drywall joint compound is applied to the interior or exterior surface of the strip and blended with the strip device 11 whether manually or by an applicator [application]. As has been common practice in the field, the bead may be run through a conventional applicator to apply joint compound to the interior surface 54 to cause such compound to, when the bead is positioned on the corner joint 104, adhere the bead temporarily in place. The strip device is then applied to the desired corner joint 104, with the joint compound adhering it in position while [juncture and] a finishing layer compound may be applied to the exterior drywall surfaces all along the joint using a conventional troweling or other such technique known in the art in order to produced a smooth, aesthetically-pleasing, finished corner joint. As the

joint compound cures, the flaps 50 will be held firmly in position by such compound itself forming mirror images of the ridges and grooves in the surface 54.

Paragraph beginning at line 10 of page 18 has been amended as follows:

The bead device of the present invention has been well received in the market place and is preferred by many over prior art beads devices. [From the foregoing, it] It will be appreciated that it [the drywall joint assembly strip device of the present invention] provides an effective and economical strip device for covering and protecting an underlying drywall joint. The strip device may be formed in many different configurations to suit a variety of drywall joint applications, and optimizes the ease and effectiveness of installing the strip device on a drywall joint through its novel flexible flaps projecting laterally beyond the respective flanges of the core and having lengthwise grooves and ridges to be anchored into joint compound as it cures. [and/or spaced-apart perforations for flow of joint compound to anchor such flaps.]

WHAT IS CLAIMED IS:

Please cancel claim 29.

Claims 15, 16, 20 and 32 have been amended.

Cont'd

15. (Amended) A drywall trim device for protecting a drywall corner joint, comprising:

a relatively rigid elongated core having a curved lengthwise cross-section so as to have a convex outer surface and a concave inner surface and including a pair of flanges terminating in respective longitudinal edges;

C/O

a paper cover bonded to said outer surface and extending beyond said longitudinal edges of said core to form flexible flaps; and

said flaps being formed with elongated grooves and ridges and [with] spaced-apart perforations in said grooves [and elongated ridges formed lengthwise along said flaps in parallel, alternating relationship].

16. (Amended) A drywall corner protection strip device for protecting a drywall corner joint, comprising:

an elongated metal core having first and second longitudinal edges;

a paper cover bonded to said metal core and extending beyond said first and second longitudinal edges to form flexible flaps each having an outwardly-facing surface and an inwardly-facing surface;

said flaps being formed with elongated grooves and ridges in alternating relationship [in said outwardly-facing surfaces] to provide linear stiffness in said flaps; and

said flaps being further formed with spaced-apart perforations formed along said grooves to provide for the communication of uncured joint compound between said outwardly-facing surfaces and said inwardly-facing surfaces during the installation of said drywall corner protection strip device onto said drywall corner joint.

17. A drywall joint assembly strip device to be covered by flowable joint compound and comprising:

an elongated core;

a paper cover bonded to said core so as to extend beyond the longitudinal edges of said core to form flexible flaps, said flaps being formed on at least one side with longitudinal rib means for, when said joint compound is applied thereto, afford a mechanical barrier to shifting relative to such compound; and

said flaps formed with compound-directing means and communication means to provide for the communication of said flowable joint compound between said outwardly-facing surfaces and said inwardly-facing surfaces to, when set up, fill the respective said perforations with compound posts.

20. (Amended) A drywall corner protection strip device, comprising:

an elongated, continuous metal core configured with a lengthwise central portion arcuate in cross-section and terminating on each longitudinal core edge in a

generally planar, lengthwise flange portion, said core thus having a generally convex outer surface and a generally concave inner surface;

a paper cover centrally bonded to said outer surface and configured such that the longitudinal edges of said cover extend beyond said longitudinal core edges to form respective flexible flaps having respective outwardly-facing and inwardly-facing surfaces;

a plurality of elongated grooves and ridges permanently formed in alternating relationship along said outwardly-facing surfaces to provide linear stiffness for said flaps; and

spaced-apart perforations formed along said grooves to provide for the communication of uncured joint compound between said outwardly-facing surfaces and said inwardly-facing surfaces during the installation of said drywall corner protection strip device onto a drywall corner joint.

30. A protective drywall joint strip device comprising:

an elongated rigid core of a predetermined width and terminating in opposite longitudinal edges;

a paper cover bonded to said core and configured to project laterally beyond the respective said edges to form respective flexible flaps;

said flaps being formed on at least one side with at least four parallel elongated grooves defining therebetween respective reinforcing ribs, said grooves being spaced 1/8th of an inch apart and said ribs being raised outwardly from the bottoms of the respective said grooves at least 1/64th of an inch; and

said flaps being further formed with respective perforations spaced equidistant along the respective said grooves and projecting extending through said flaps to form open flow apertures at least 1/64th of an inch in transverse cross action for flow therethrough of joint compound.

32. (Amended) A protective drywall joint strip device comprising:

an [An] elongated, a relatively rigid core terminating in at least one longitudinal edge and having an outer surface;

a relatively flexible cover bonded to said core and configured to project laterally beyond said edge to form a flexible longitudinal flap; and

said flap including elongated lengthwise groove [screw] and ridge means spaced from said edge and configured to form a plurality of lengthwise grooves and ridges to be anchored in joint compound to anchor such strip device thereto or by such strip device may be placed over a joint between a pair of drywall panels and joint compound thereover to be received in said grooves to cooperate in anchoring said ribs against shifting relative to such joint material.

33. (New) A protective drywall fitting for covering the joint formed between a pair of drywall panels formed by respective bodies having the opposite sides covered by drywall cover paper having adjacent outwardly facing marginal surfaces and comprising:

an elongated, relatively rigid core for positioning in covering relationship over the joint seam and including at least one longitudinal edge;

a relatively flexible paper cover configured to cover such marginal surfaces of the drywall cover paper and project beyond the said edge thereof to form a flexible longitudinal projecting flap; and

said flap including elongated lengthwise groove and ridges formed on the interior surface for receipt of such joint compound in such grooves to cooperate to, when such joint compound is cured, cooperate in anchoring such device to such drywall panels.

34. (New) A tape or drywall finishing bead including:

an elongated rigid core formed along its opposite sides with longitudinal edges;

a paper having an underside covering the rigid core and projecting laterally outwardly from the opposite side thereof to form laterally projecting flexible flaps;

a bond bonding the paper covering to the core; and

the flaps being formed on at least their underside with longitudinal, parallel, alternating ridges and grooves for receipt of joint compound to form complementary mirror images of the ridges of grooves so that upon curing the respective grooves and ridges of such flaps trap such flaps mechanically in such compound.

35. (New) The method of claim 33 wherein:

the paper is constructed of fibers and strengthening compound mixed together at the time of manufacture.

36. (New) The method of claim 35 wherein:

the strengthening compound encapsulates the fibers.

ABSTRACT OF THE DISCLOSURE

A drywall joint assembly strip device comprised of an elongate core having a cover bonded to its exterior surface and extending beyond its longitudinal edges to form flexible flaps in which longitudinal, parallel grooves and ridges [and/or spaced-apart perforations are] formed for flow thereto of joint compound during the installation process.